## 09 / 530 983 416 Rec'd PCT/PTO 0 8 MAY 2000

-1-

#### **BOX PCT**

IN THE UNITED STATES DESIGNATED/ELECTED OFFICE OF THE UNITED STATES PATENT AND TRADEMARK OFFICE UNDER THE PATENT COOPERATION TREATY--CHAPTER II

5 APPLICANT(S):

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ATTORNEY DOCKET NO.:

P00,0861

INTERNATIONAL APPLICATION NO:

PCT/DE98/03229

INTERNATIONAL FILING DATE:

**05 NOVEMBER 1998** 

**INVENTION:** 

ARRANGEMENT FOR PREDICTING AN ABNORMALITY OF A SYSTEM AND FOR IMPLEMENTING AN ACTION OPPOSING THE

ABNORMALITY

10 Assistant Commissioner for Patents, Washington D.C. 20231

### INFORMATION DISCLOSURE STATEMENT

According to 37 C.F.R. §1.97(b)

Sir:

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In accordance with the provisions of 37 C.F.R. §1.56 and the requirements of 37 C.F.R. §1.98, Applicant respectfully requests that a citation and examination of the references identified on the attached PTO 1449 form be made during the course of examination of the above-identified application for United States Patent.

The present Information Disclosure Statement is being filed according to 37 C.F.R. §1.97(b) and before the latter occurrence of:

- (1) three months from the filing date of a national application;
- (2) three months from the date of entry of the national stage as set forth in 37 C.F.R. §1.491 in an international application; or

(3) the mailing date of a first Office Action on the merits.

# 09/530983 416 Rec'd PCT/PTO 08 MAY 2000

-2-

### **REMARKS**

The attached PTO 1449 form lists prior art references identified in the International Search Report, copy of which is enclosed herewith.

|    | · AA      | United States Patent 5,251,626                          |
|----|-----------|---|
| 5  | AB        | United States Patent 4,889,526                          |
|    | AE        | German reference DE 43 37 110                           |
|    | AF        | International application WO 96/36860                   |
|    | AG        | German reference DE 196 04 803                          |
|    | AH        | International application WO 95/10075                   |
| 10 | AI        | German reference DE 195 31 967                          |
|    | Articles: |   |
|    | AM        | D. Hoyer et al., "GRUNDLAGEN UND ERFAHRUNGEN            |
|    |           | ZUR MODELLIERUNG CHAOTISCHER                            |
|    |           | ATTRAKTOREN DER   |
| 15 |           | HERZFREQUENZFLUKTUATIONEN MIT                           |
|    |           | KUENSTLICHEN NEURONALEN NETZEN" Vol. 40,                |
|    |           | July (1995), pp. 190-194, XP-002097627                  |
|    | AN        | L. Machado et al., "SEQUENTIAL VERSUS STANDARD          |
|    |           | NEURAL NETWORKS FOR PATTERN RECOGNITION:                |
| 20 |           | AN EXAMPLE USING THE DOMAIN OF CORONARY                 |
|    |           | HEART DISEASE", Computers in biology & medicine; Vol.   |
|    |           | 27, No. 4, July (1997), pp. 267-281, XP002097626        |
|    | AO        | G. Deco et al., "Determining the Information Flow of    |
|    |           | Dynamical Systems from Continuous Probability           |
| 25 |           | Distributions", The American Physical Society, Physical |
|    |           | Review Letters, Vol. 78, No. 12, March (1997),          |
|    |           | pp. 2345-2348   |
|    | AP        | C. Schittenkopf et al., "Testing nonlinear Markovian    |
|    |           | hypotheses in dynamical systems, Physica D104, (1997),  |
| 30 |           | pp. 61-74   |
|    |           |   |

-3-

| AQ | J. Herz et al., "Introduction to the Theory of Neural     |
|----|---|
|    | Computation", Lecture Notes Vol. 1, (1991), pp. 197-250   |
| AR | G. Deco et al., "An Information Theoretic Approach to     |
|    | Neural Computing", Chapter 7, (1996), pp. 170-186         |
| AS | B. Gluckman, et al., "Electric Field Suppression of       |
|    | Epileptiform Activity in hippocampal Slices,              |
|    | Rapid Publication, Journal of Neurophysiology 76, (1996), |
|    | pp. 4202-4205   |

### **Explanation of Relevance**

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References AA, AB, AE-AF, and AM were all identified in the International Search Report. References AO-AS were discussed in the specification. Reference AE is a German Patent discussing an operating system that uses a neural network to analyze an electrocardiograph to determine heart rhythm disturbances. Reference AG is a German Patent discussing a system condition monitor that uses chaos theory. Reference AI is a German Patent discussing a training method for a neural network. Reference AN discusses the use of neural networks for pattern recognition for heart disease.

English abstracts for German Patents AE, AG, and AI have been provided. Full translations will be provided to the Examiner upon request.

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The filing of the present Information Disclosure Statement is not to be construed as a representation that a search has been made, and is not to be construed as an admission that the information cited in the present Information Disclosure Statement is, or is considered to be, material to patentability as defined in 37 C.F.R. §1.56(b).

-4-

The above citation of prior art is not a representation that such art constitutes a complete or exhaustive listing of all pertinent prior art, nor that it necessarily includes the closest or most relevant art. The aforementioned citation comprises a voluntary citation of prior art of which applicant and his attorney are presently aware and is not intended to serve as a substitute for the Examiner's own search.

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